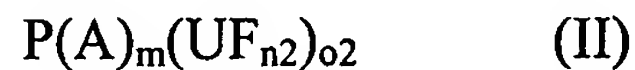
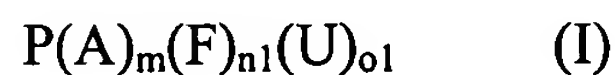


AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): Phosphorus-containing polymer, suitable for coating dielectric surfaces, of the general formula I or II,



in which

P stands for a linear or branched, uncrosslinked homo- or heteropolymeric polymer component selected from the group consisting of: ~~wherein the polymer component P does not represent a polyacrylate nor a polyamideacrylate~~

- i) polyvinyl alcohols, polyvinyl amine, polyallyl amine, polyethylene imine, imides of polymaleic anhydride-alt-methyl vinyl ether or derivatives thereof;
- ii) linear polyethylene glycols, polypropylene glycols or derivatives thereof;
- iii) branched or star-branched polyethylene glycols;
- iv) polyureas, polyurethanes, polyesters, polycarbonates, polyhydroxycarboxylic acids or derivatives thereof, which are made up of diols/polyols and/or diamines/polyamines;
- v) polysaccharides as cellulose, starch, agarose, dextran, chitosan, hyaluronic acid or derivatives thereof;

vi) polypeptides or derivatives thereof which are made of one or more various amino acids; and

vii) branched polyols based on glycidol;

A stands for identical or different phosphorus-containing groups bonded to P,

m stands for a number from 3 to 1000,

F stands for identical or different functional groups bonded directly or indirectly to P, which are present in addition to A,

n1 stands for a number from 1 to 1000,

n2 stands for a number from 1 to 100,

U stands for identical or different, linear or branched, uncrosslinked oligomeric or polymeric segments, made up of identical or different monomers, which are bonded to P,

o1 stands for a number from 0 to 1000,

o2 stands for a number from 1 to 1000.

Claim 2 (Previously presented): Polymer according to Claim 1, wherein said polymer contains phosphorus-containing groups A in an amount of from 0.001 to 10 mEq.

Claim 3 (Previously presented): Polymer according to Claim 1, wherein said polymer contains functional groups F in an amount of from 0.001 to 20 mEq.

Claim 4 (Previously presented): Polymer according to Claim 1, wherein said polymer contains segments U in an amount of from 0.001 to 20 mEq.

Claim 5 (Previously presented): Polymer according to Claim 1, wherein the polymer has a Mw of from 1000 to 10,000,000 g/mol.

Claim 6 (Previously presented): Polymer according to Claim 1, wherein the polymer component P is a statistical copolymer or block copolymer.

Claim 7 (Previously presented): Polymer according to Claim 1, wherein the polymer component P is hydrophilic.

Claim 8 (Previously presented): Polymer according to Claim 1, wherein said polymer contains phosphorus-containing groups A in the form of a spacer carrying from one to six identical or different phosphorus-containing radicals.

Claim 9 (Previously presented): Polymer according to Claim 1, wherein said polymer contains functional groups F that can form covalent bonds, coordination bonds or take part in biochemical recognition reactions.

Claim 10 (Previously presented): Polymer according to Claim 1, wherein said polymer contains functional groups F with crosslinkers.

Claim 11 (Currently amended): Polymer according to Claim 1, wherein the segments U have a Mw[[,]] of from 100 to 10,000 g/mol.

Claim 12 (Previously presented): Polymer according to Claim 1, wherein the groups or segments U are hydrophilic.

Claim 13 (Currently amended): Process for preparing a polymer according to Claim 1, wherein the polymer component P is bonded to phosphorus-containing group A and optionally oligomeric or polymeric ~~segments U~~ segments U, comprising the step of copolymerizing

(A) a monomer containing a phosphorus-containing group A, or a plurality of identical or different monomers containing identical or different phosphorus-containing groups A

with

(B) a monomer containing a functional group F, or a plurality of identical or different monomers containing identical or different functional groups F, and

(C) optionally, a monomer containing a segment U, or a plurality of identical or different monomers containing identical or different segments U,

to form a polymer of the formula I $(P(A)_m(F)_{n1}(U)_{o1})$,

or with

(B') a monomer containing a unit $(UF_{n2})_{o2}$ according to formula II, or a plurality of identical or different monomers containing identical or different units of the formula $(UF_{n2})_{o2}$ according to formula II,

to form a polymer of the formula II $(P(A)_m(UF_{n2})_{o2})$.

Claim 14 (Previously presented): Process for preparing a polymer according to Claim 1, comprising the following steps:

- (i) preparing a polymer, which forms the polymer component P and carries identical or different functional groups that are suitable as functional groups F,
- (ii) reacting some of the functional groups to form identical or different phosphorus-containing groups A, and

(iii) optionally, reacting some of the functional groups to form identical or different segments U,

wherein step (iii) can be carried out after, before or together with step (ii), and wherein not all the functional groups are converted in steps (ii) and (iii), and the functional groups that are not converted in steps (ii) and (iii) form the functional groups F of the polymer.

Claim 15 (Previously presented): Process according to Claim 14, wherein some or all of the functional groups that have not been converted in steps (ii) and (iii) are reacted with one or more identical or different crosslinkers to form functional groups F.

Claim 16 (Canceled).

Claim 17 (Canceled).

Claim 18 (Canceled).

Claim 19 (Canceled).

Claim 20 (Previously presented): Polymer according to Claim 1, wherein said polymer contains phosphorus-containing groups A in an amount of from 0.01 to 5 mEq.

Claim 21 (Previously presented): Polymer according to Claim 1, wherein said polymer contains phosphorus-containing groups A in an amount of from 0.1 to 3 mEq.

Claim 22 (Previously presented): Polymer according to Claim 1, wherein said polymer contains functional groups F in an amount of from 0.01 to 10 mEq.

Claim 23 (Previously presented): Polymer according to Claim 1, wherein said polymer contains functional groups F in an amount of from 0.5 to 10 mEq.

Claim 24 (Previously presented): Polymer according to Claim 1, wherein said polymer contains segments U in an amount of from 0.01 to 10 mEq.

Claim 25 (Previously presented): Polymer according to Claim 1, wherein said polymer contains segments U in an amount of from 0.5 to 10 mEq.

Claim 26 (Previously presented): Polymer according to Claim 1, wherein the polymer has a Mw of from 2100 to 1,000,000 g/mol.

Claim 27 (Previously presented): Polymer according to Claim 1, wherein the polymer has a Mw of from 5000 to 500,000 g/mol.

Claim 28 (Previously presented): Polymer according to Claim 1, wherein the polymer has a Mw of from 5000 to 300,000 g/mol.

Claim 29 (Previously presented): Polymer according to Claim 1, wherein the polymer has a Mw of from 10,000 to 150,000 g/mol.

Claim 30 (Previously presented): Process for preparing a polymer according to Claim 1, comprising the following steps:

- (i) preparing a polymer, which forms the polymer component P and carries identical or different functional groups that are suitable as functional groups F, said functional groups F being selected from the group consisting of hydroxyl groups, carboxyl groups, derivatives of carboxyl groups and amine groups,
- (ii) reacting some of the functional groups to form identical or different phosphorus-containing groups A, and
- (iii) optionally, reacting some of the functional groups to form identical or different segments U,

wherein step (iii) can be carried out after, before or together with step (ii), and wherein not all the functional groups are converted in steps (ii) and (iii), and the functional groups that are not converted in steps (ii) and (iii) form the functional groups F of the polymer.

Claim 31 (Canceled).

Claim 32 (Canceled).

Claim 33 (Canceled).

Claim 34 (New): The polymer of claim 1, wherein in polymer component P, the diols/polyols are polyethylene glycols or polypropylene glycols.

Claim 35 (New): The polymer of claim 1, wherein in polymer component P, the diamines/polyamines are jeffamine, polyethylene imines, polyvinyl amine, polyallyl amine or polyethylene imine.

Claim 36 (New): The polymer of claim 1, wherein in polymer component P, the polysaccharide derivatives are hydroxyalkyl derivatives or acid semiesters.

Claim 37 (New): The polymer of claim 1, wherein in polymer component P, the polypeptides are selected from the group consisting of polylysine, polyphenylalanine-lysine, polyglutamates, polymethylglutamate-glutamate, polyphenylalanine-glutamate, polyserine, polyglycine and polyserine-glycerine.

Claim 38 (New): The polymer of claim 1, wherein in polymer component P, the branched polyols based on glycidol are polyols based on glycidol with a degree of polymerization of 1 to 300, a polydispersity index below 1.7, a content of branched units, based on the sum of all monomeric units and determined by ^{13}C NMR spectroscopy, of 10 to 33 mol%.